CLAIMS

1. A refuse collection vehicle for loading, compacting, transporting and ejecting refuse materials comprising:

(a) a hollow refuse storage enclosure for containing compacted refuse having a forward refuse receiving opening, and a rear refuse discharge opening closed by a tailgate;

(b) a generally full width charging hopper disposed forward of said storage enclosure for receiving refuse from refuse containers, said charging hopper having sidewalls and a floor and being in communication with said refuse receiving opening of said storage enclosure;

(c) a followerless packer-ejector panel mechanism for moving refuse materials deposited in said charging hopper from said charging hopper into said storage enclosure, packing said refuse materials into said storage enclosure and fully ejecting said refuse materials from said storage enclosure;

(d) one or more container handling devices selected from the group consisting of side-loading and front-loading container handling devices and a combination thereof for emptying containers into said charging hopper; and

(e) control system for controlling the operation of said packer-ejector panel in relation to said container handling device.

2. A vehicle as in claim 1 wherein said packer-ejector panel mechanism has a plurality of selectable packing stroke cycles of different lengths in the packing mode.

3. A vehicle as in claim 2 wherein said packing stroke cycles include at least a short sweep cycle and a

full packing cycle.

4. A vehicle as in claim 3 wherein said control system selects said packing stroke cycle based on a count of loading operations.

5. A vehicle as in claim 1 wherein said packer-ejector panel mechanism is operated by a pair of crossing, telescoping linear operators.

6. A vehicle as in claim 5 wherein said telescoping linear operators are hydraulic cylinders.

7. A vehicle as in claim 1 including a truck chassis.

8. A vehicle as in claim 1 wherein said one or more container handling devices includes both a side-loading and a front-loading device.

9. A vehicle as in claim 2 wherein said packer-ejector panel mechanism has a packing stroke cycle shorter in duration than any related container handling device tipping cycle.

10. A side-loading, refuse collection vehicle for loading, compacting, transporting and ejecting refuse materials comprising:

(a) a hollow refuse storage enclosure for containing compacted refuse having a forward refuse receiving opening, and a rear refuse discharge opening including a tailgate;

(b) a generally full width charging hopper disposed forward of said storage enclosure for receiving refuse from refuse containers, said charging hopper having sidewalls and a floor and being in communication with said refuse receiving opening of said storage enclosure;

(c) a followerless packer-ejector panel mechanism for moving refuse materials deposited in said charging hopper from said charging hopper into said storage enclosure, packing said refuse

materials into said storage enclosure and fully ejecting said refuse materials from said storage enclosure;

(d) a side-loading container handling device mounted from said vehicle capable of a handling cycle including lateral operation to access, empty and replace containers located to the side of said vehicle and which, when retracted, has a sufficiently narrow profile that fits within the lateral confines of the truck body; and

(e) control system for controlling the operation of said packer-ejector panel in relation to said container handling device.

11. A vehicle as in claim 10 wherein said container handling device includes an arm and a converging grabber and wherein said arm is mounted from a laterally extendable device.

12. A vehicle as in claim 11 wherein said laterally extendable device is a telescoping device.

13. A vehicle as in claim 10 wherein said arm of said container handling device further includes articulated linkage enabling a container to be maintained in a generally upright position until it is tipped into said charging hopper.

14. A vehicle as in claim 14 wherein said packer-ejector panel mechanism has a plurality of selectable packing stroke cycles of different lengths in the packing mode.

15. A vehicle as in claim 14 wherein said packing stroke cycles include at least a short sweep cycle and a full cycle.

16. A vehicle as in claim 14 wherein said control system selects said packing stroke cycle based on a count of loading operations.

17. A vehicle as in claim 10 wherein said packer-ejector panel mechanism is operated by a pair of crossing, telescoping linear operators.

18. A vehicle as in claim 17 wherein said telescoping linear operators are hydraulic cylinders.

19. A vehicle as in claim 10 wherein said vehicle body is mounted on a truck chassis.

20. A vehicle as in claim 1 including a front loading container handling device.

21. A vehicle as in claim 20 wherein said front loading container handling device is the only loading device.

22. A vehicle as in claim 21 including a truck chassis.

23. A vehicle as in claim 4 wherein said packing stroke cycle is microprocessor controlled.

24. A side-loading refuse collection vehicle for loading, compacting, transporting and ejecting refuse materials comprising:

(a) a hollow refuse storage enclosure for containing compacted refuse having a forward refuse receiving opening, and a rear refuse discharge opening including a tailgate;

(b) a generally full width charging hopper disposed forward of said storage enclosure for receiving refuse from refuse containers, said charging hopper having sidewalls and a floor and being in communication with said refuse receiving opening of said storage enclosure;

(c) a followerless packer-ejector panel mechanism for moving refuse materials deposited in said charging hopper from said charging hopper into said storage enclosure, packing said refuse materials into said storage enclosure and fully ejecting said refuse materials from said

storage enclosure;

(d) a side-loading container handling system mounted from said vehicle including a laterally extending device carrying a container lift and dump mechanism which includes a pivoting lift and empty mechanism having a pair of spaced main arms outwardly flanked by a pair of link arms, said main arms being connected to be pivoted at a fixed end by a double-ended hydraulic rotary actuator and journaled on a main arm common pin at a free end, said link arms being journaled to said mechanism at a fixed end and journaled on a link arm common pin at a free end, said link arm common pin being located at a fixed offset from said main arm common pin and a container grabbing device having opposed arms mounted in fixed relation to said fixed offset of said pins such that in the lowered stored position said main arms and said link arms align to provide a narrow profile which does not extend beyond the width of said collection vehicle when said lift and dump device is stowed next to said charging hopper.